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features by means of a mouse or other input device. Thus, on Internet flight planners of prior art the route must be generated and built on the Server. Then once built and combined as a new image the Server must upload the image onto the Client computer. This forces the screen to be totally refreshed, which again produces the undesirable side effect of the user loosing his reference and adding confusion to the planning process.

Now observing Figure , and in accordance with an important aspect (one of the main features) of the invention these shortcomings are overcome by means of:

- 1) A Chart Scrolling software system (28), residing on an Internet

  Server hard disk (8), which facilitates chart scrolling and chart

  viewing without refreshing the entire Client computer display (27).

  Pursuant to the invention, the loaded chart (29) is always larger

  (e.g. the absolute X, Y, pixel dimension) than the assigned chart

  window area (30) residing on the Client Display (28). This provides

  two very important benefits. First, it allows the Client's browser

  to turn on the scroll bars, and second, as a result, the chart may

  be scrolled up to the limit of the underlying loaded chart,
- 2) In the preferred embodiment, if the chart scrolling results in moving past an area beyond the bounds of a previously loaded chart, a window pops up and informs the user that a new chart segment is being loaded. During this loading process, the previously loaded chart remains on screen (e.g. the user is able to view the remaining chart without loosing his reference). A new cached chart is then delivered to the Client corresponding to the newly desired chart

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## Brief Description of the Drawings

FIGURE Al is a flow chart of the operations that comprise the Server.

Figure A2 is a flow chart of the operations that comprise chart

11 creation.

Figure A3 is a flow chart of the Chart retrieval, Scrolling, and Route drawing
Routing—System.

Figure A4 illustrates the chart retrieval, sorelling and route drawing

processes. No such figure.